

Claims:

1. An isolated nucleic acid comprising a nucleic acid sequence selected from the group consisting of:
 - 5 (a) a nucleic acid which is represented by SEQ ID NO: 1;
 - (b) a nucleic acid which is represented by SEQ ID NO: 3;
 - (c) a nucleic acid sequence that is at least 70% identical to the nucleic acid sequence of SEQ ID NO: 1;
 - 10 (d) a nucleic acid sequence that is at least 70% identical to the nucleic acid sequence of SEQ ID NO: 3;
 - (e) a nucleic acid sequence which is represented by the complement to SEQ ID NO: 1;
 - (f) a nucleic acid sequence which is represented by the complement to SEQ ID NO: 3;
 - 15 (g) a nucleic acid sequence that is at least 70% identical to the complement of the nucleic acid sequence represented by SEQ ID NO: 1; and
 - (h) a nucleic acid sequence that is at least 70% identical to the complement of the nucleic acid sequence represented by SEQ ID NO: 3.
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2. An isolated nucleic acid that hybridizes under high stringency conditions to the nucleic acid represented by SEQ ID NO: 1 or SEQ ID NO: 3 or to the complement of SEQ ID NO: 1 or SEQ ID NO: 3.
- 25 3. An isolated nucleic acid comprising a nucleic acid sequence that, due to the degeneracy of the genetic code, encodes the amino acid sequence

encoded by the nucleic acid sequence depicted in SEQ ID NO: 1 or SEQ ID NO: 3.

4. An isolated Toll-like receptor polypeptide comprising an amino acid sequence selected from the group consisting of:
 - 5 (a) an amino acid sequence that is at least 70% identical to the amino acid sequence depicted in SEQ ID NO: 2;
 - (b) an amino acid sequence that is at least 70% identical to the amino acid sequence depicted in SEQ ID NO: 4;
 - 10 (c) an amino acid sequence that is at least 95% identical to the amino acid sequence depicted in SEQ ID NO: 2;
 - (d) an amino acid sequence that is at least 95% identical to the amino acid sequence depicted in SEQ ID NO: 4;
 - (e) an amino acid sequence that is represented by SEQ ID NO: 2; and
 - (f) an amino acid sequence that is represented by SEQ ID NO: 4.
- 15 5. The isolated polypeptide of claim 4, wherein the isolated polypeptide is a variant of a polypeptide represented by SEQ ID NO: 2 or SEQ ID NO: 4.
6. The isolated polypeptide of claim 4, wherein the isolated polypeptide is a fragment of a polypeptide represented by SEQ ID NO: 2 or SEQ ID NO: 4.
- 20 7. A vector comprising nucleic acid sequence encoding a polypeptide that is at least 70% identical to the polypeptide represented by SEQ ID NO: 2 or SEQ ID NO: 4.
8. The vector of claim 7, wherein the nucleic acid is operably linked to a transcriptional regulatory sequence.

9. Isolated host cells comprising exogenous nucleic acid encoding a polypeptide that is at least 70% identical to the polypeptide represented by SEQ ID NO: 2 or SEQ ID NO: 4.
10. The isolated host cells of claim 9, wherein the exogenous nucleic acid is a vector.
11. The isolated host cells of claim 10, wherein the vector is a vector of claim 8.
12. A method of producing a Toll-like receptor polypeptide comprising culturing the host cells of claim 11 under conditions suitable for expression of the polypeptide, wherein the Toll-like receptor polypeptide is thereby produced.
13. The method of claim 12, wherein the Toll-like receptor polypeptide is selected from group consisting of polypeptides represented by SEQ ID NO: 2 and SEQ ID NO: 4.
14. A monoclonal or polyclonal antibody, or a chimera or fragment thereof, which is specifically reactive with an epitope of a polypeptide of claim 4.
15. A method for identifying compounds which modulate Toll-like receptor activity comprising:
- (a) contacting a polypeptide according to claim 4 with a test agent; and
- (b) monitoring for modulation of Toll-like receptor activity,
- wherein a compound which modulates Toll-like receptor activity is thereby identified.
16. The method of claim 15, wherein the Toll-like receptor activity monitored in step (b) is NF- κ B activation.
17. The method of claim 15, wherein the Toll-like receptor activity is TLR11 activity.

18. The method of claim 15, wherein the Toll-like receptor activity is TLR12 activity.
19. A compound identified by a method according to claim 15.
- 5 20. A method of treating an individual having a disorder that is responsive to Toll-like receptor modulation, which method comprises administering to the individual an effective amount of a compound according to claim 19 or an antibody according to claim 14.
- 10 21. The method of claim 20, wherein the disorder is selected from the group consisting of: an inflammatory disorder, an autoimmune disease, a cardiovascular disorder, and a systemic infection.
- 15 22. The method according to claim 21, wherein the disorder is selected from the group consisting of: a viral, fungal or bacterial infection, including urinary tract infections; asthma; rhinitis; chronic obstructive pulmonary disease (COPD); emphysema; an inflammatory bowel disease such as ulcerative colitis or Crohn's disease; rheumatoid arthritis; osteoarthritis; psoriasis; Alzheimers disease; atherosclerosis, Multiple Sclerosis, diabetes; and septic shock syndrome associated with systemic infection involving gram positive or gram negative bacteria.
- 20 23. A polypeptide according to claim 4 for use as an adjuvant.
24. The use of a compound according to claim 19 in the manufacture of a medicament for the treatment of a disorder that is responsive to Toll-like receptor modulation.